



Appendix A

RF Test Data for BLE (Conducted Measurement)

Product Name: 4K Projector

Test Model: KJM-125A

Environmental Conditions

|                    |           |
|--------------------|-----------|
| Temperature:       | 23.5° C   |
| Relative Humidity: | 52.2%     |
| ATM Pressure:      | 100.0 kPa |
| Test Engineer:     | Joker Hu  |
| Supervised by:     | Ling Zhu  |





A.1 -6dB Bandwidth

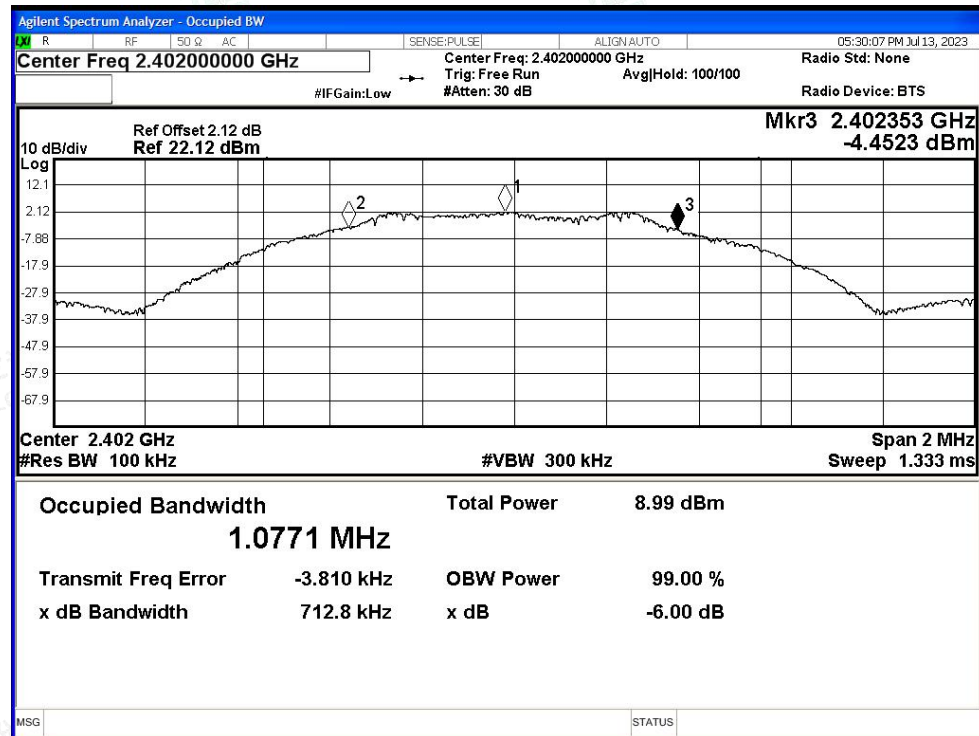
| Condition | Mode   | Frequency (MHz) | Antenna | -6 dB Bandwidth (MHz) | Limit -6 dB Bandwidth (MHz) | Verdict |
|-----------|--------|-----------------|---------|-----------------------|-----------------------------|---------|
| NVNT      | BLE 1M | 2402            | Ant0    | 0.713                 | $\geq 0.5$                  | Pass    |
| NVNT      | BLE 1M | 2440            | Ant0    | 0.701                 | $\geq 0.5$                  | Pass    |
| NVNT      | BLE 1M | 2480            | Ant0    | 0.701                 | $\geq 0.5$                  | Pass    |



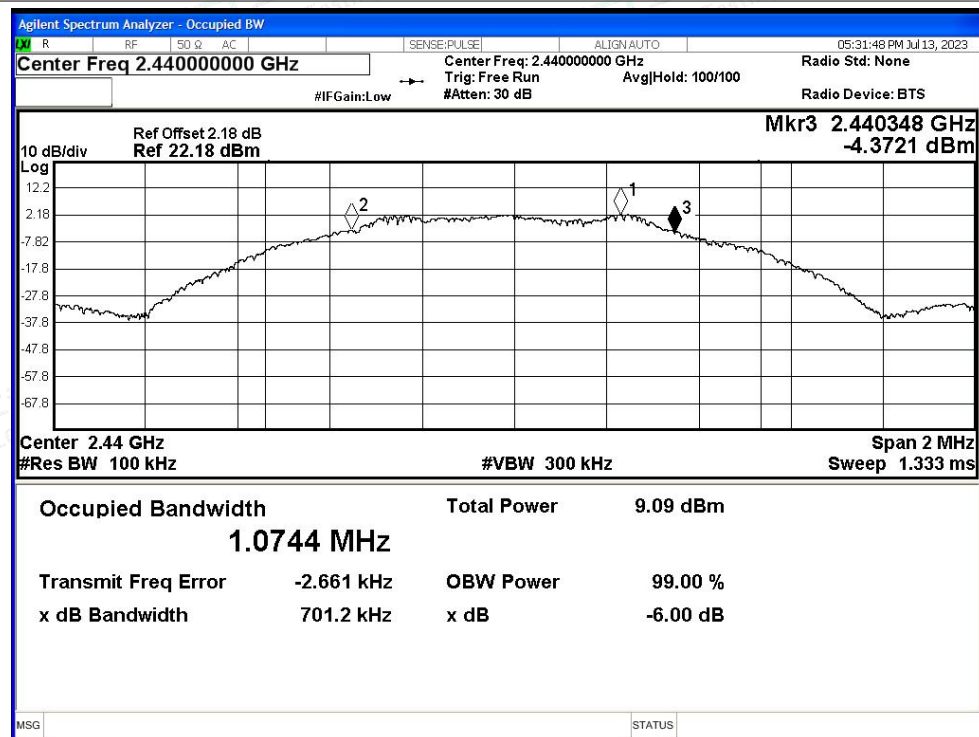


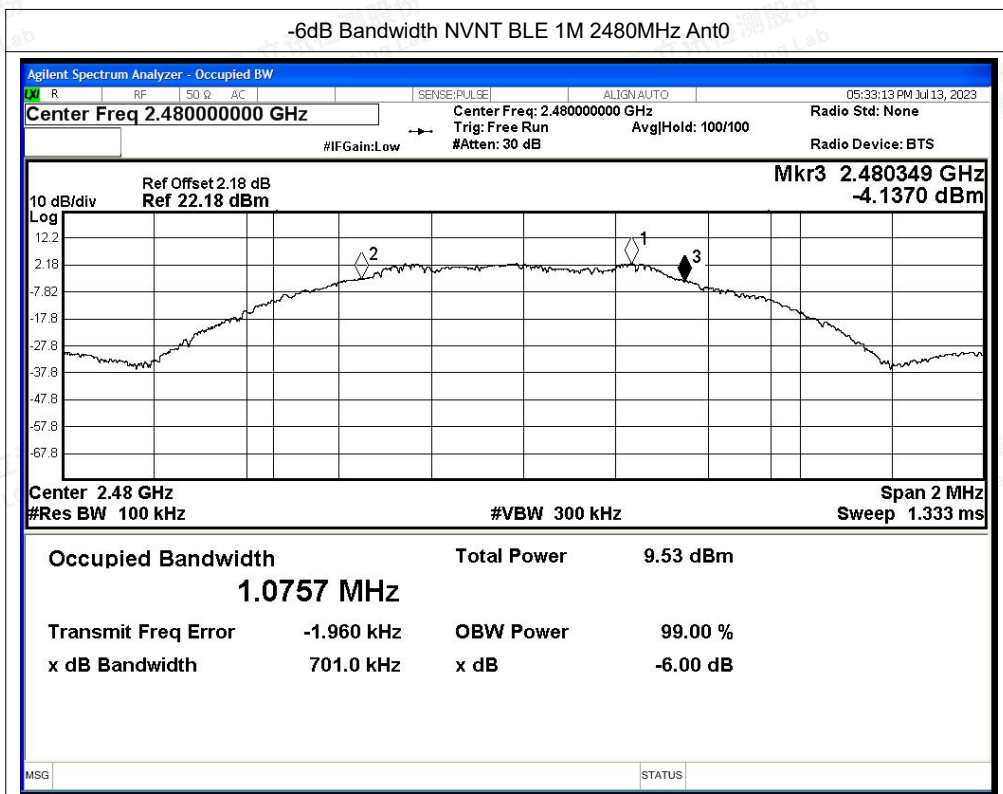
## Test Graphs

-6dB Bandwidth NVNT BLE 1M 2402MHz Ant0



-6dB Bandwidth NVNT BLE 1M 2440MHz Ant0







## A.2 Maximum Conducted Output Power

| Condition | Mode   | Frequency (MHz) | Antenna | Total Power (dBm) | Limit (dBm) | Verdict |
|-----------|--------|-----------------|---------|-------------------|-------------|---------|
| NVNT      | BLE 1M | 2402            | Ant0    | 3.21              | 30          | Pass    |
| NVNT      | BLE 1M | 2440            | Ant0    | 3.39              | 30          | Pass    |
| NVNT      | BLE 1M | 2480            | Ant0    | 3.81              | 30          | Pass    |

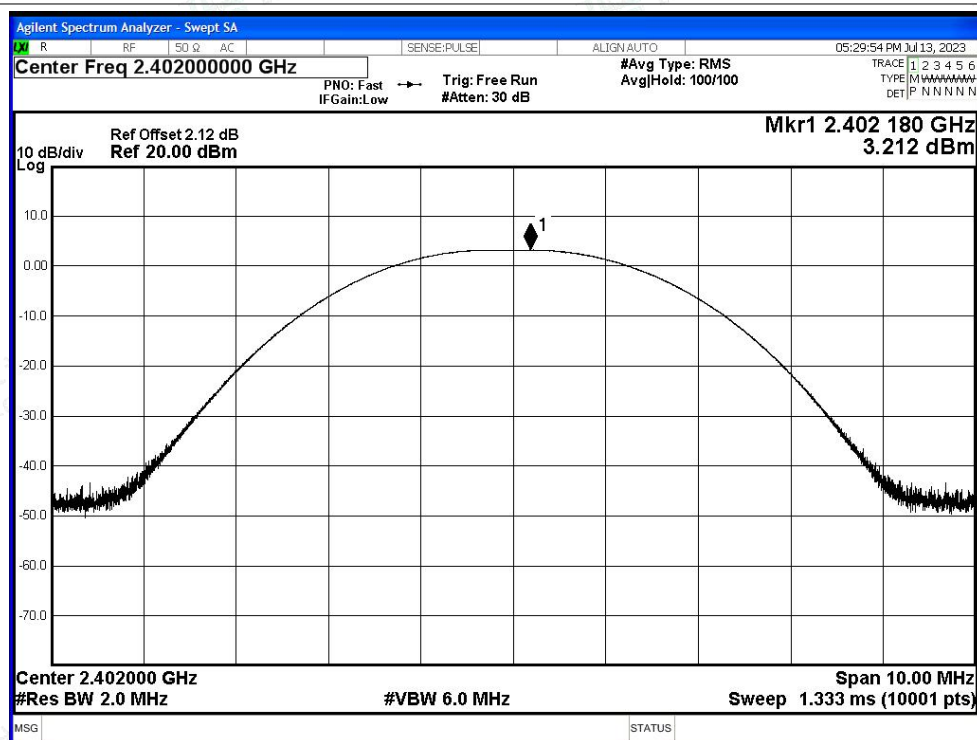


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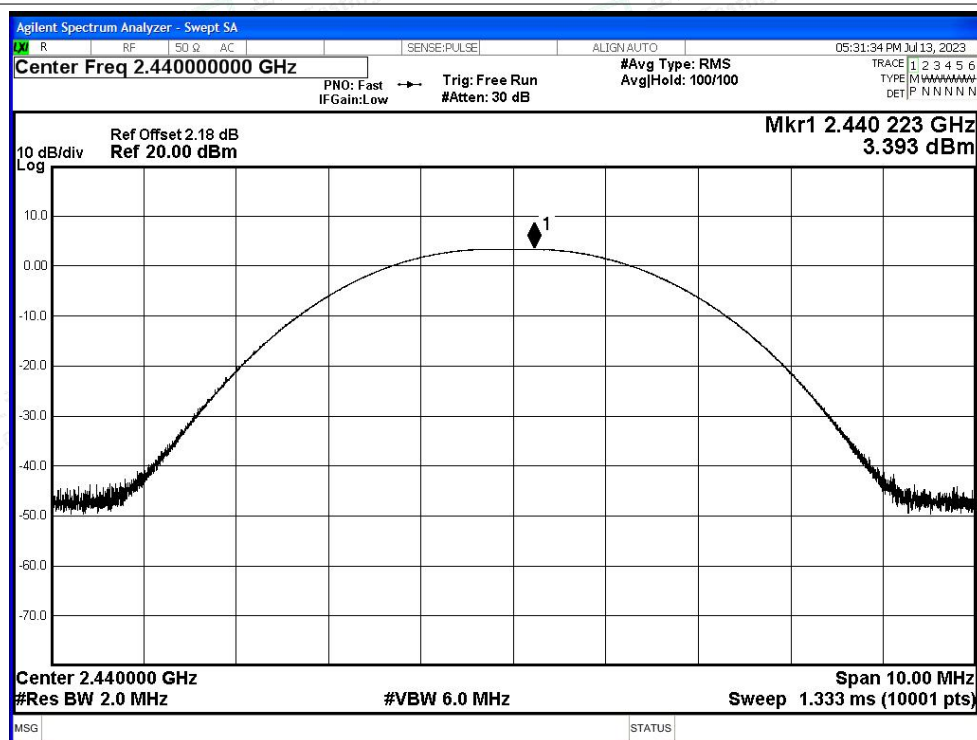


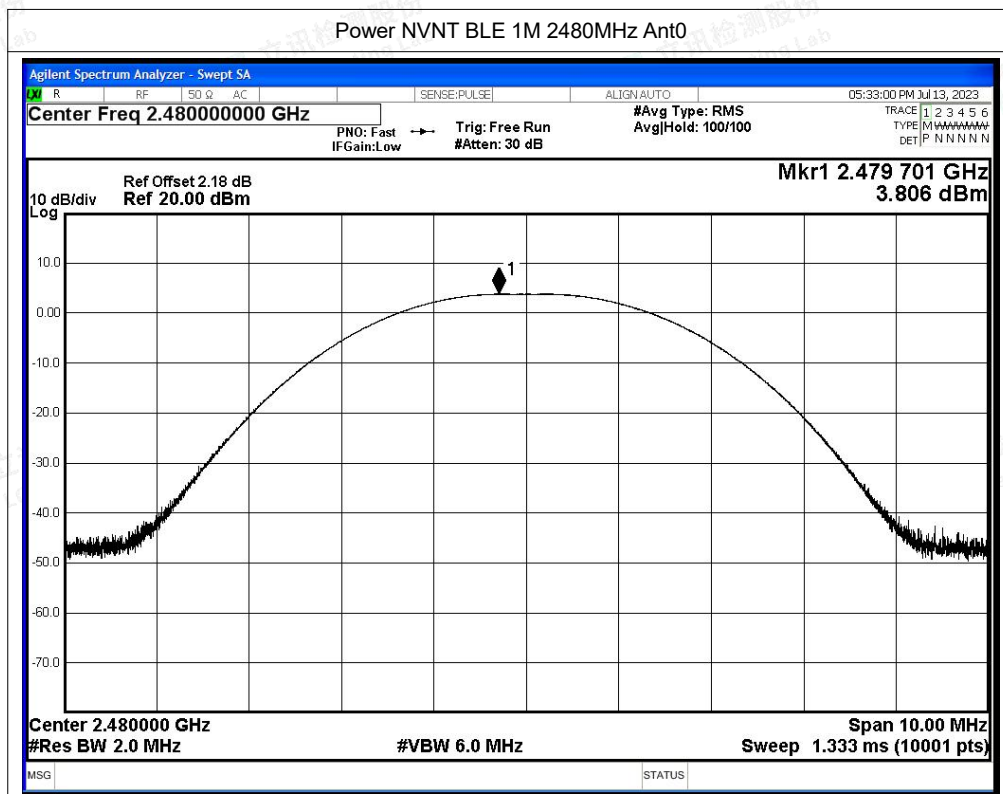
## Test Graphs

Power NVNT BLE 1M 2402MHz Ant0



Power NVNT BLE 1M 2440MHz Ant0







### A.3 Maximum Power Spectral Density Level

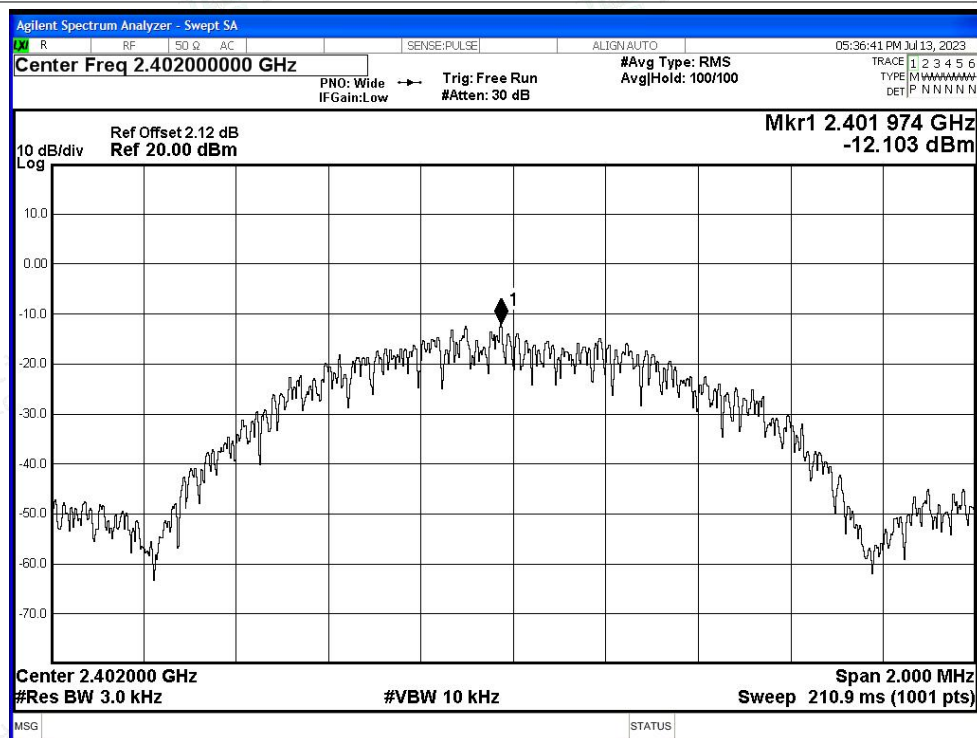
| Condition | Mode   | Frequency (MHz) | Antenna | Total PSD<br>(dBm/3kHz) | Limit<br>(dBm/3kHz) | Verdict |
|-----------|--------|-----------------|---------|-------------------------|---------------------|---------|
| NVNT      | BLE 1M | 2402            | Ant0    | -12.1                   | 8                   | Pass    |
| NVNT      | BLE 1M | 2440            | Ant0    | -11.71                  | 8                   | Pass    |
| NVNT      | BLE 1M | 2480            | Ant0    | -11.24                  | 8                   | Pass    |



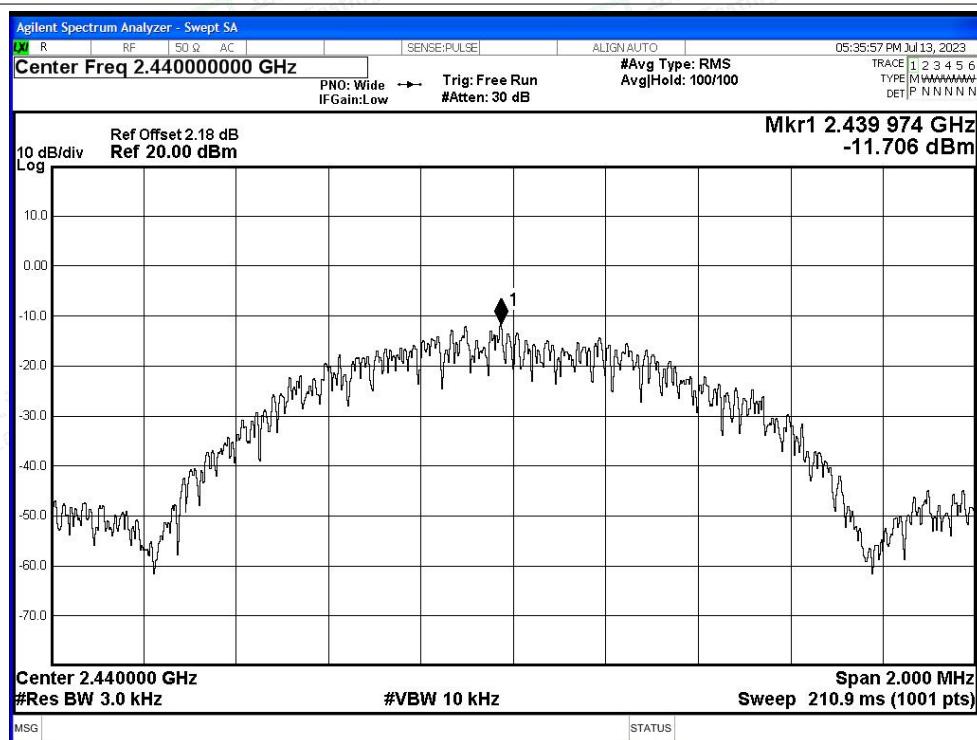


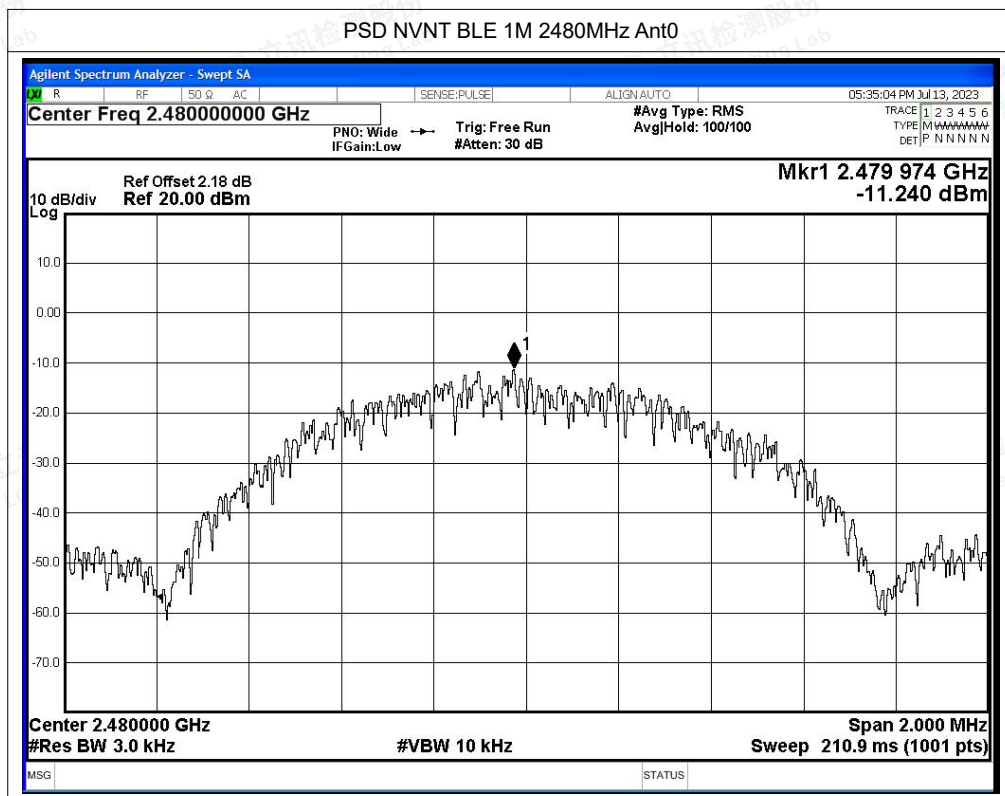
## Test Graphs

PSD NVNT BLE 1M 2402MHz Ant0



PSD NVNT BLE 1M 2440MHz Ant0







### A.4 Band Edge

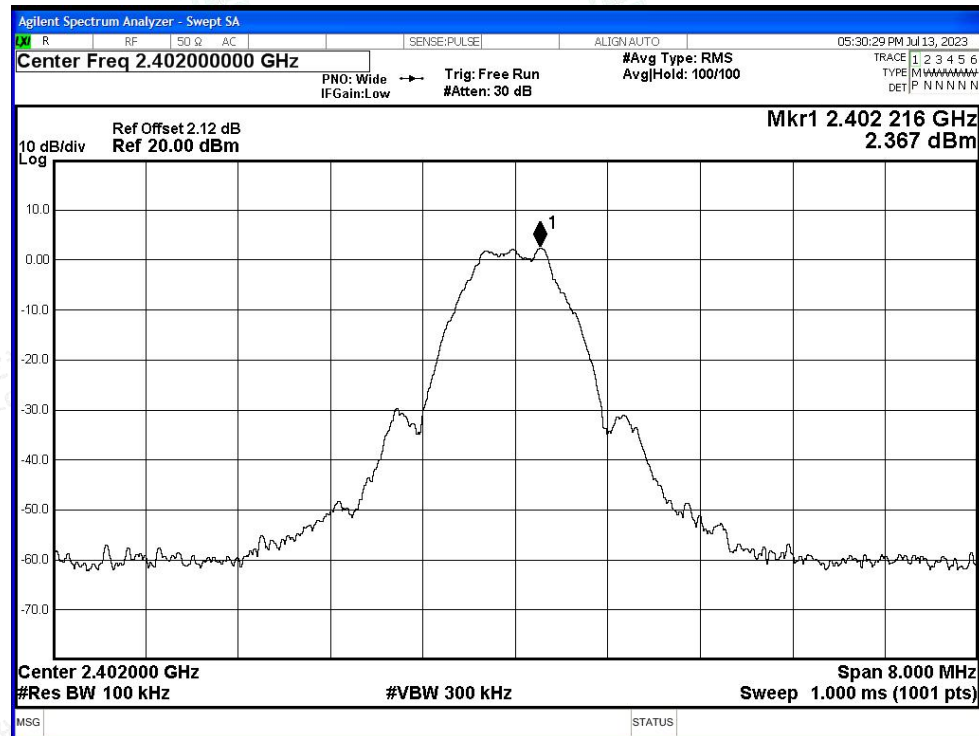
| Condition | Mode   | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|--------|-----------------|---------|-----------------|-------------|---------|
| NVNT      | BLE 1M | 2402            | Ant0    | -58.89          | -20         | Pass    |
| NVNT      | BLE 1M | 2480            | Ant0    | -59             | -20         | Pass    |



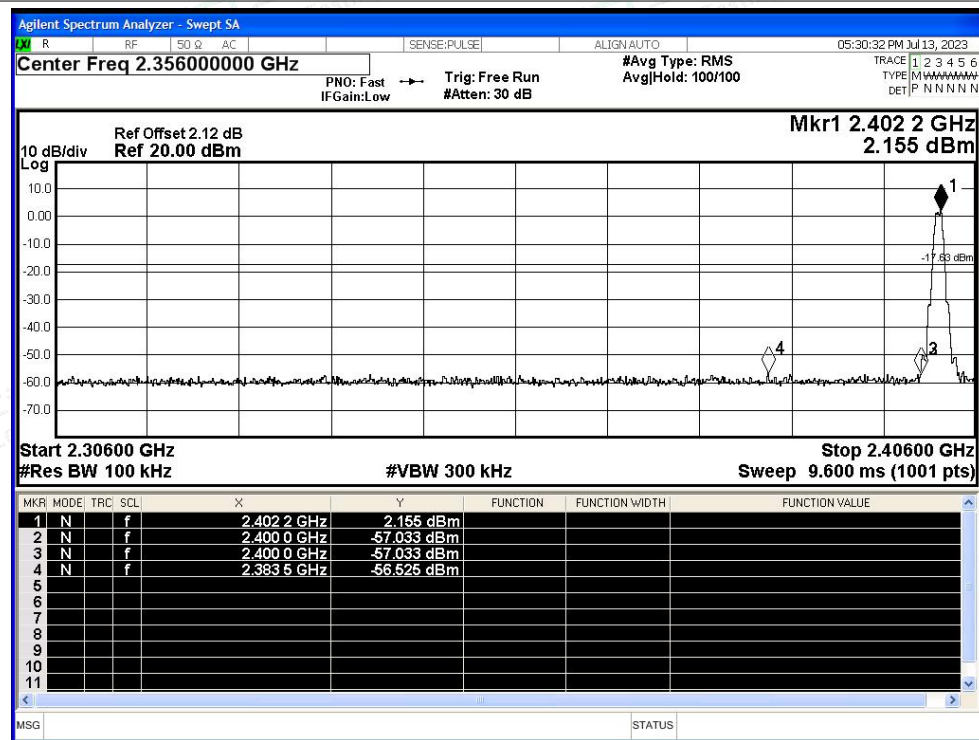


## Test Graphs

## Band Edge NVNT BLE 1M 2402MHz Ant0 Ref

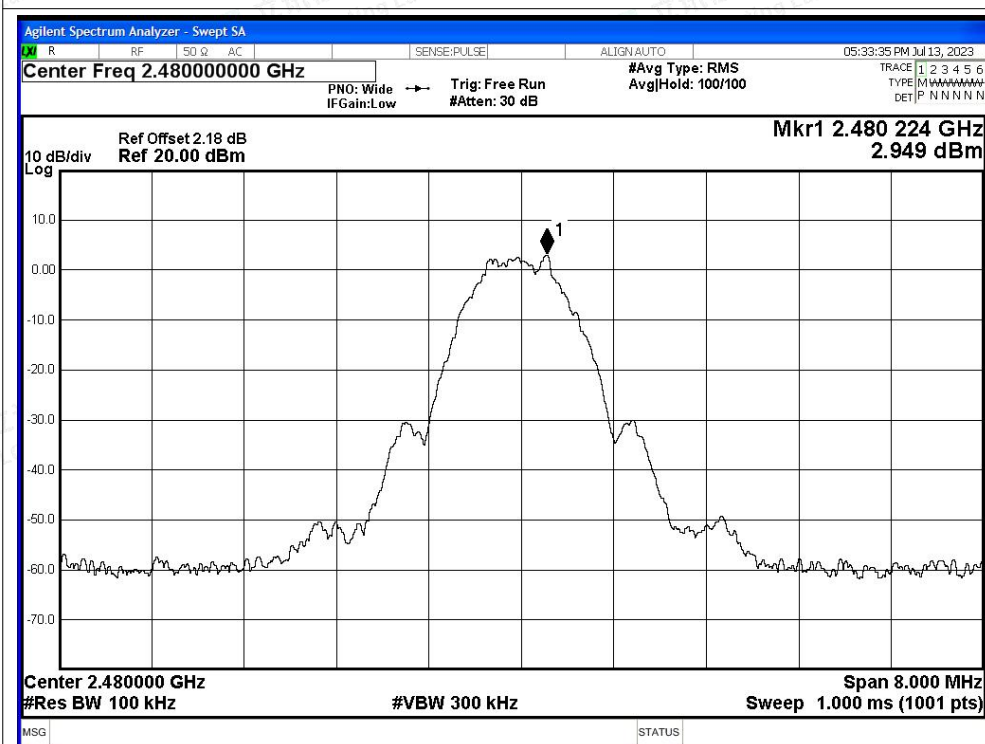


## Band Edge NVNT BLE 1M 2402MHz Ant0 Emission

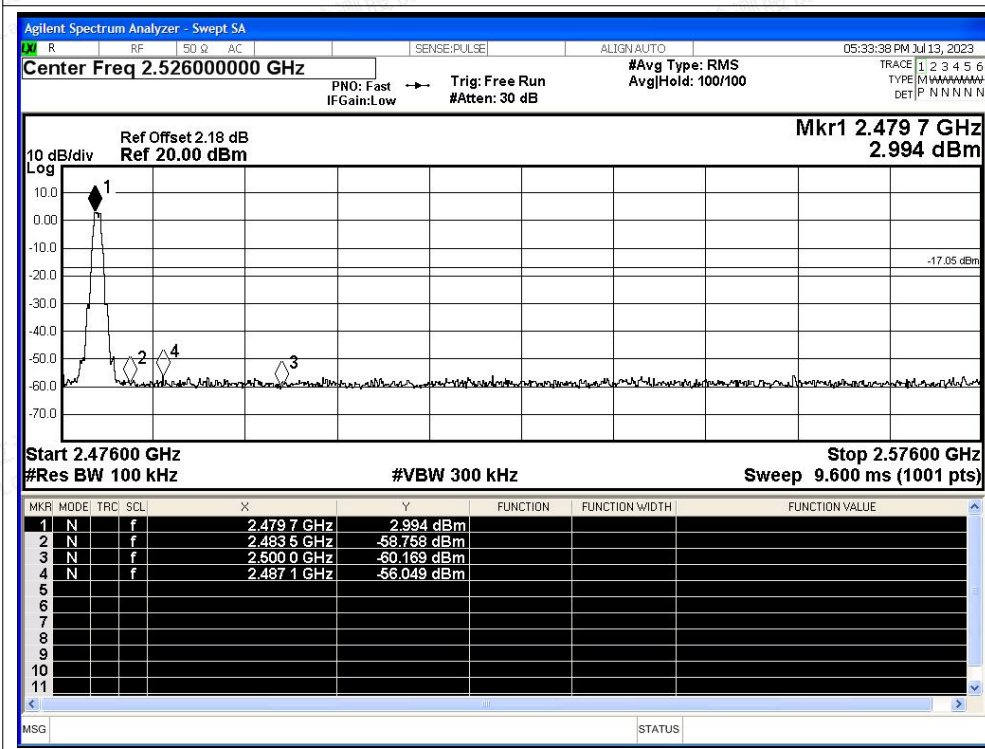




## Band Edge NVNT BLE 1M 2480MHz Ant0 Ref



## Band Edge NVNT BLE 1M 2480MHz Ant0 Emission





### A.5 Conducted RF Spurious Emission

| Condition | Mode   | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|-----------|--------|-----------------|---------|-----------------|-------------|---------|
| NVNT      | BLE 1M | 2402            | Ant0    | -56.73          | -20         | Pass    |
| NVNT      | BLE 1M | 2440            | Ant0    | -57.08          | -20         | Pass    |
| NVNT      | BLE 1M | 2480            | Ant0    | -58.02          | -20         | Pass    |

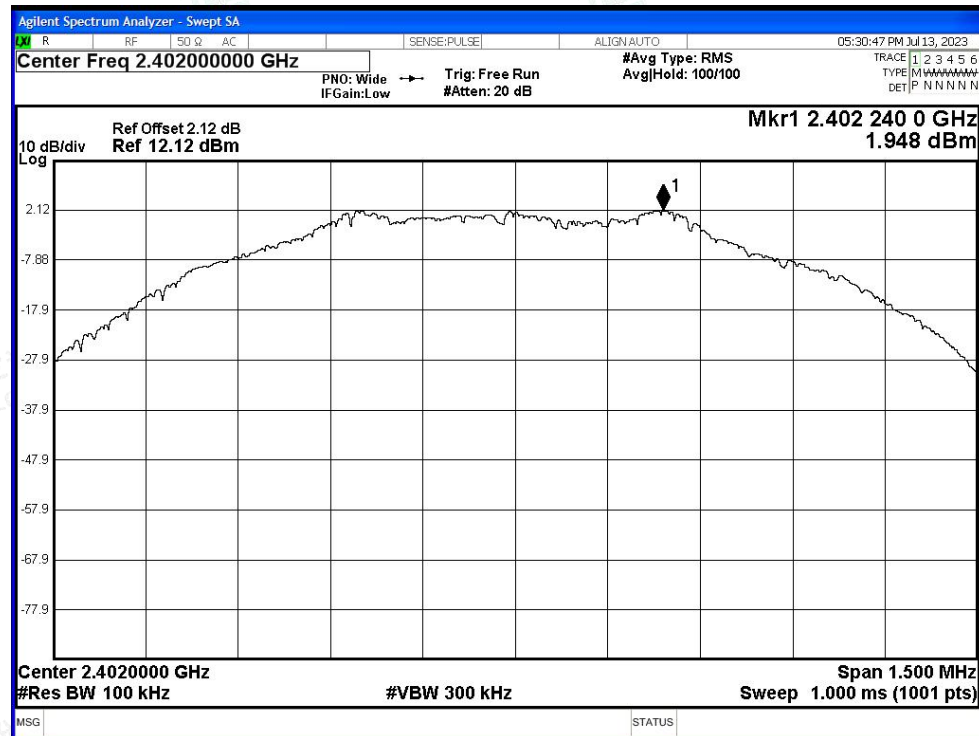


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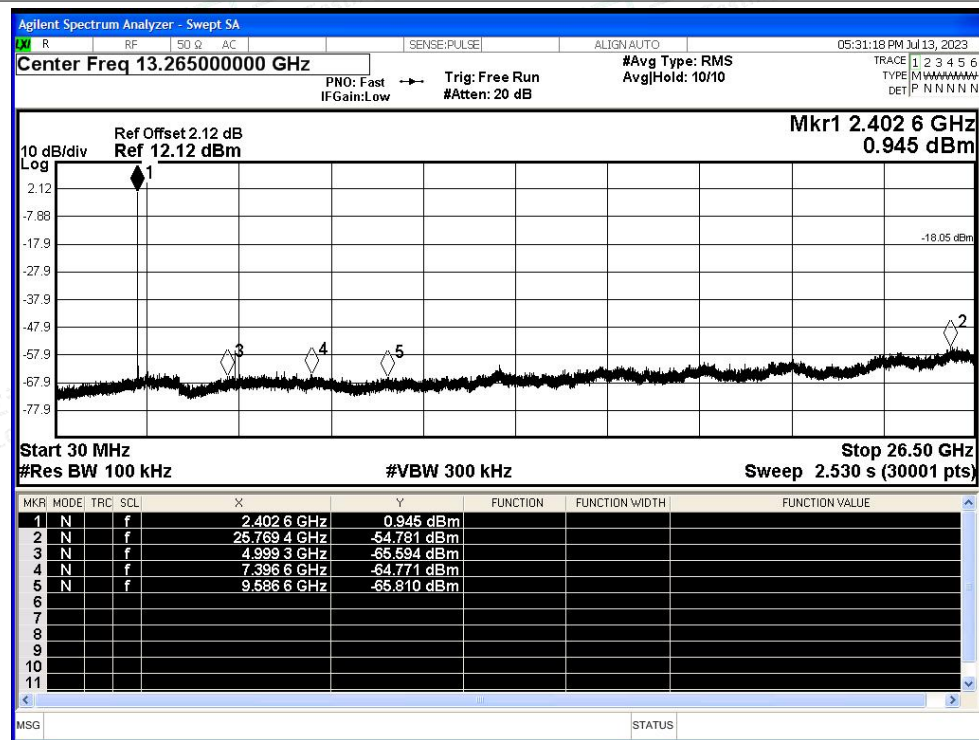


## Test Graphs

Tx. Spurious NVNT BLE 1M 2402MHz Ant0 Ref

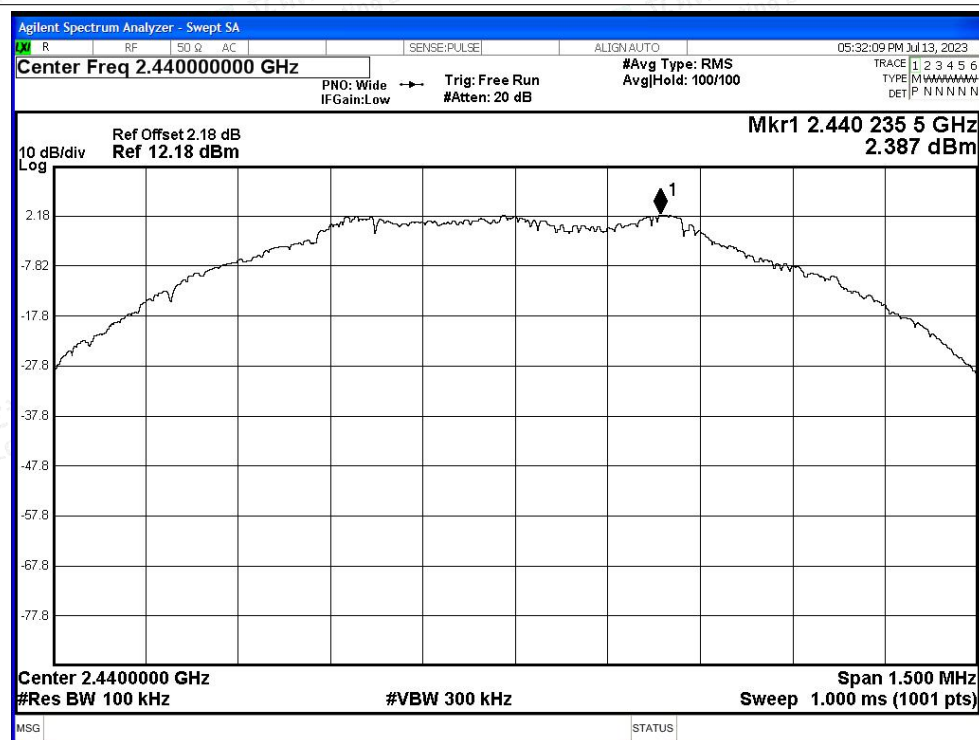


Tx. Spurious NVNT BLE 1M 2402MHz Ant0 Emission

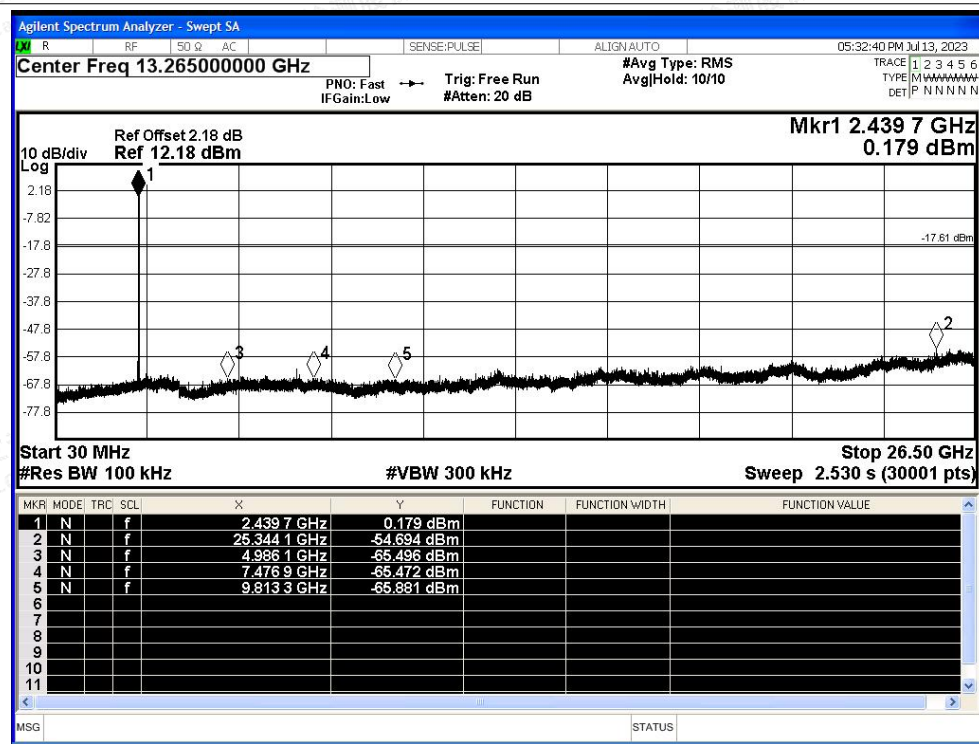




## Tx. Spurious NVNT BLE 1M 2440MHz Ant0 Ref

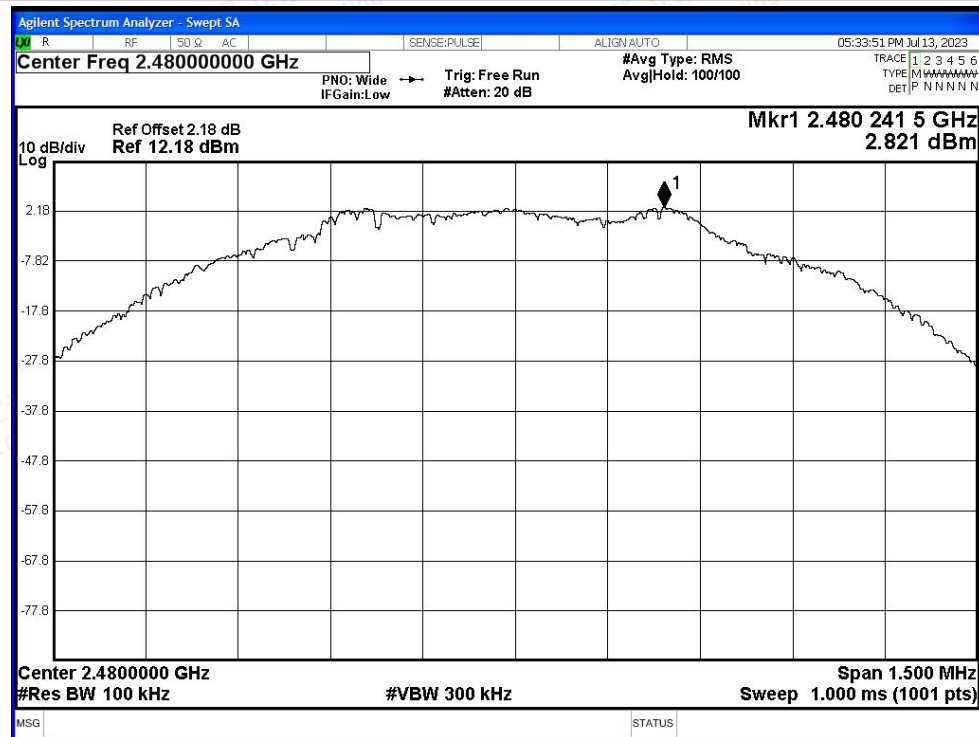


## Tx. Spurious NVNT BLE 1M 2440MHz Ant0 Emission

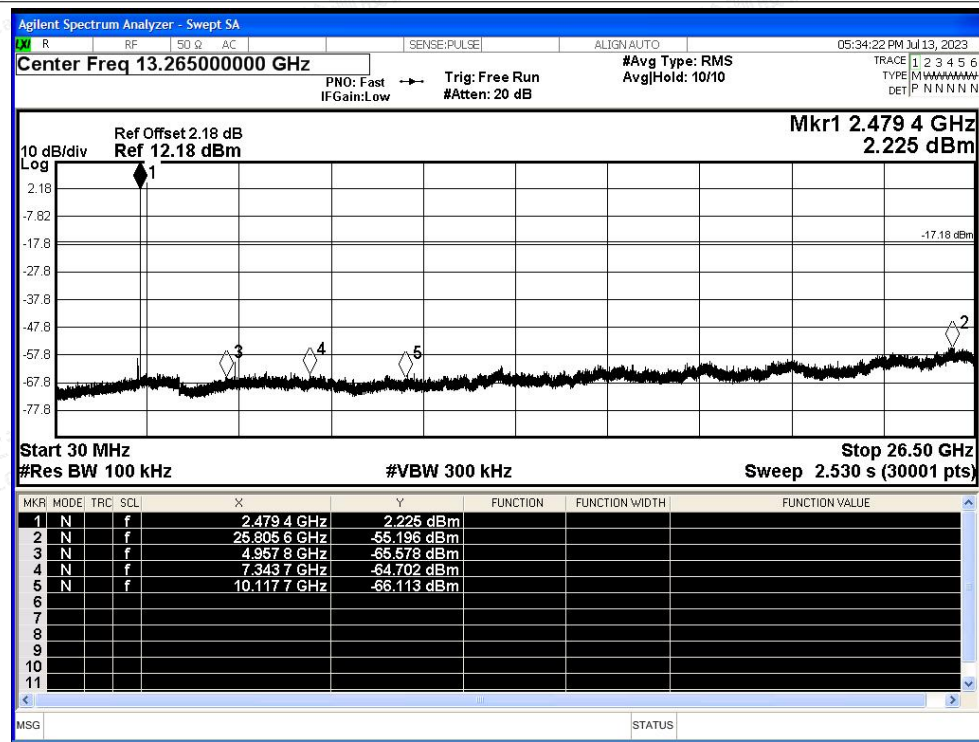




## Tx. Spurious NVNT BLE 1M 2480MHz Ant0 Ref



## Tx. Spurious NVNT BLE 1M 2480MHz Ant0 Emission





## A.6 Duty Cycle

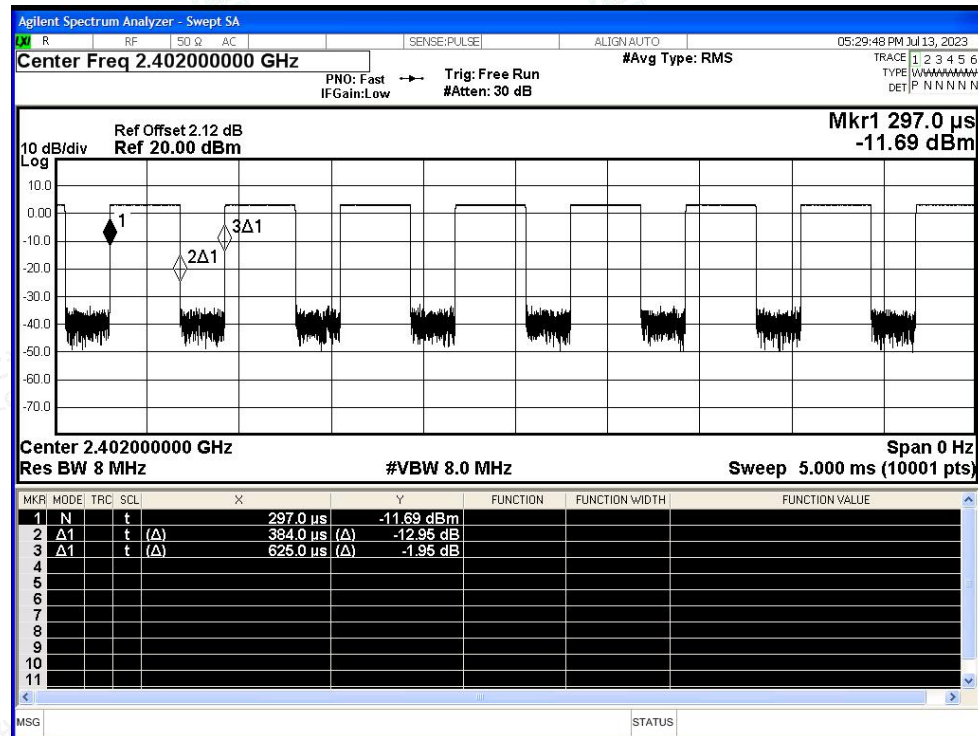
| Condition | Mode   | Frequency (MHz) | Antenna | Duty Cycle (%) | Correction Factor (dB) | 1/T (kHz) |
|-----------|--------|-----------------|---------|----------------|------------------------|-----------|
| NVNT      | BLE 1M | 2402            | Ant0    | 61.44          | 2.12                   | 2.6       |
| NVNT      | BLE 1M | 2440            | Ant0    | 61.44          | 2.12                   | 2.6       |
| NVNT      | BLE 1M | 2480            | Ant0    | 61.36          | 2.12                   | 2.61      |



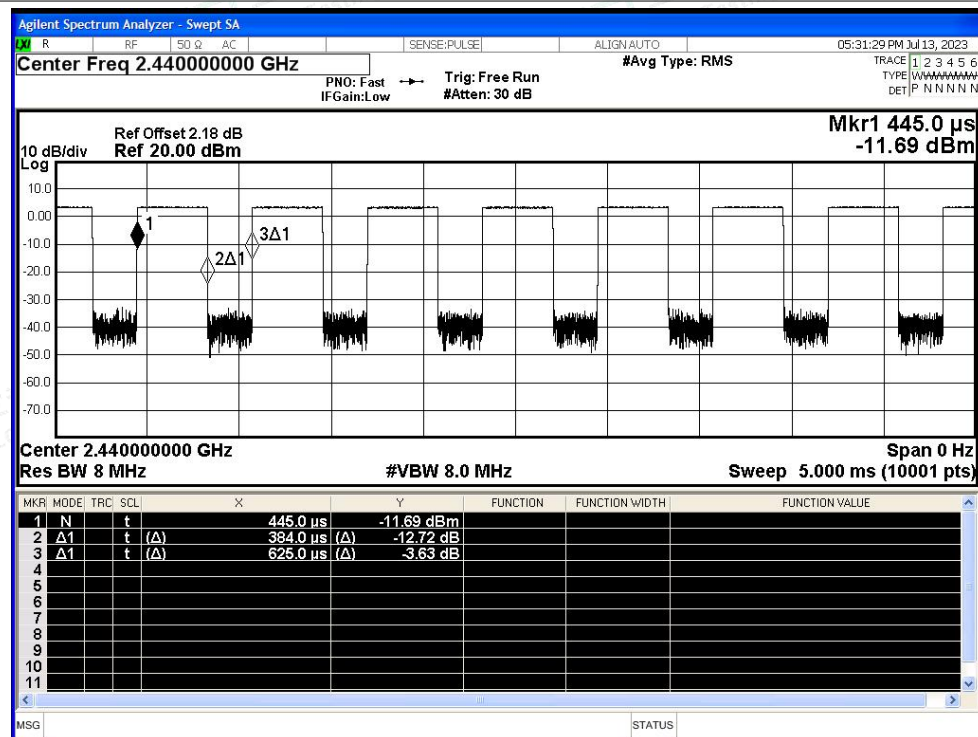


## Test Graphs

## Duty Cycle NVNT BLE 1M 2402MHz Ant0



## Duty Cycle NVNT BLE 1M 2440MHz Ant0

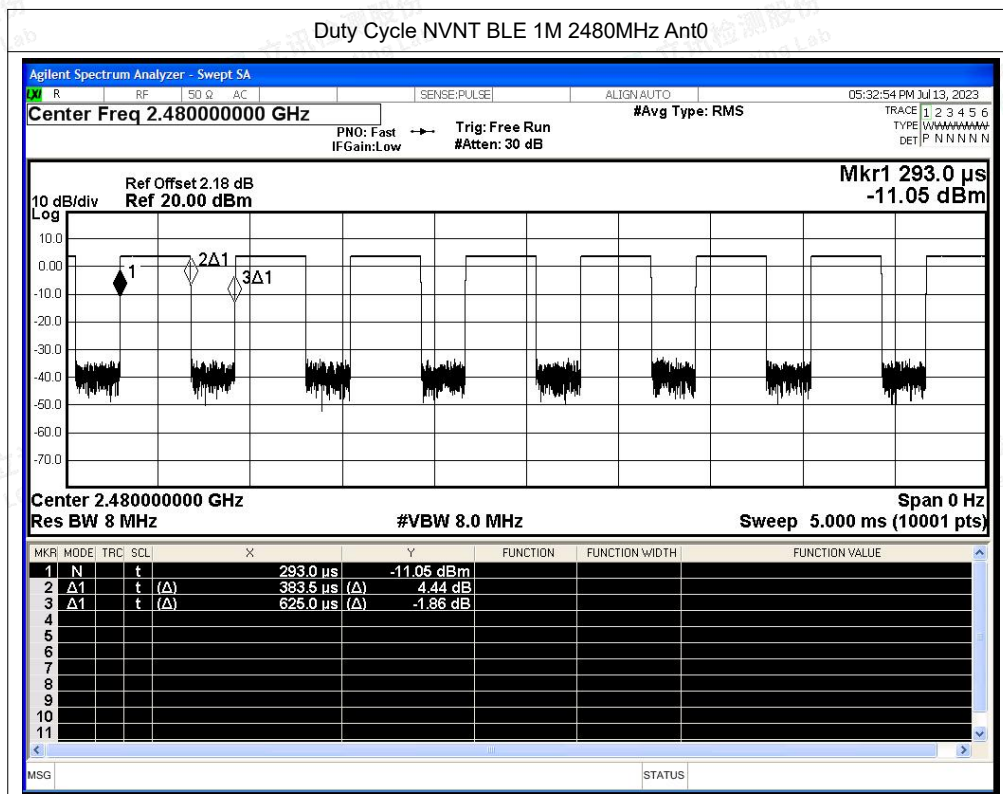


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## A.7 Restrict Band

| Condition | Mode   | Frequency (MHz) | Antenna | Spur Freq (MHz) | Power (dBm) | Gain (dBi) | E (dBuV/m) | Detector | Limit (dBuV/m) | Verdict |
|-----------|--------|-----------------|---------|-----------------|-------------|------------|------------|----------|----------------|---------|
| NVNT      | BLE 1M | 2402            | Ant0    | 2310            | -50.52      | 2.63       | 47.34      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2402            | Ant0    | 2310            | -56.74      | 2.63       | 41.12      | Average  | 54             | Pass    |
| NVNT      | BLE 1M | 2402            | Ant0    | 2387.088        | -46.82      | 2.63       | 51.04      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2402            | Ant0    | 2387.28         | -56.16      | 2.63       | 41.70      | Average  | 54             | Pass    |
| NVNT      | BLE 1M | 2402            | Ant0    | 2390            | -49.21      | 2.63       | 48.65      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2402            | Ant0    | 2390            | -56.41      | 2.63       | 41.45      | Average  | 54             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant0    | 2483.5          | -50.07      | 2.63       | 47.79      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant0    | 2483.5          | -52.74      | 2.63       | 45.12      | Average  | 54             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant0    | 2488.888        | -46.23      | 2.63       | 51.63      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant0    | 2483.512        | -52.74      | 2.63       | 45.12      | Average  | 54             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant0    | 2500            | -49.27      | 2.63       | 48.59      | Peak     | 74             | Pass    |
| NVNT      | BLE 1M | 2480            | Ant0    | 2500            | -56.02      | 2.63       | 41.84      | Average  | 54             | Pass    |

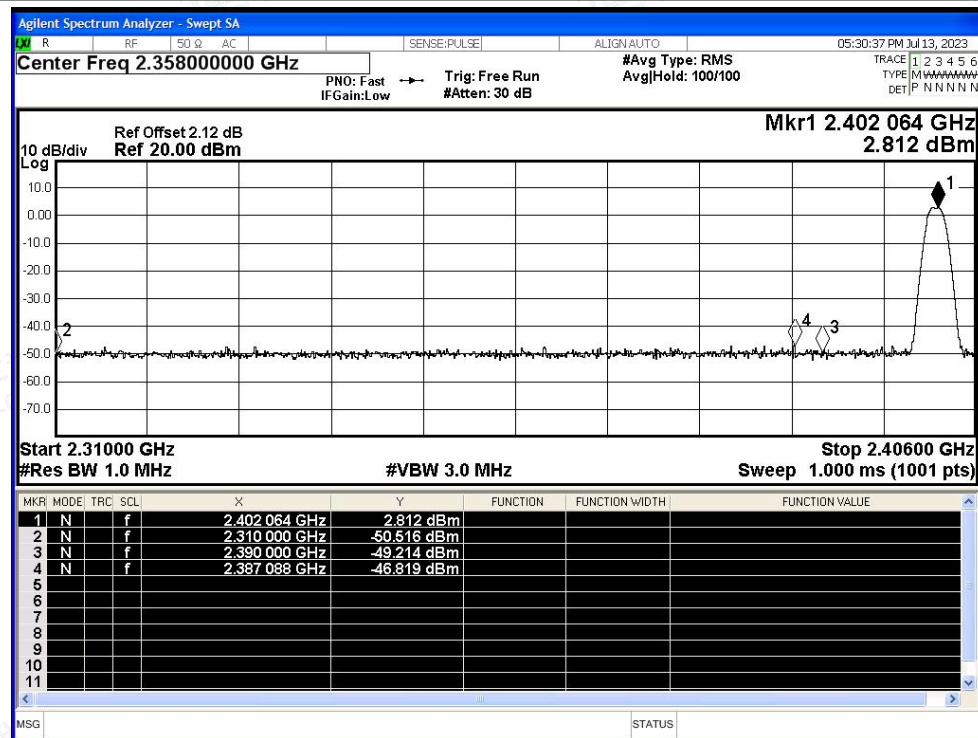


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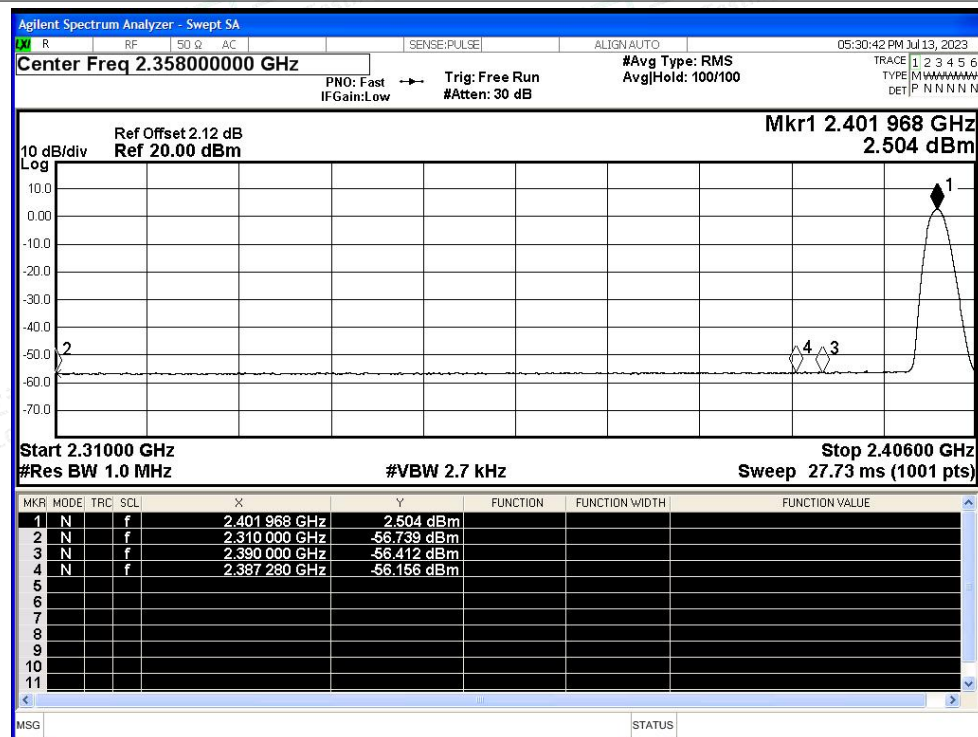


## Test Graphs

## Restrict Band NVNT BLE 1M 2402MHz Ant0 Peak

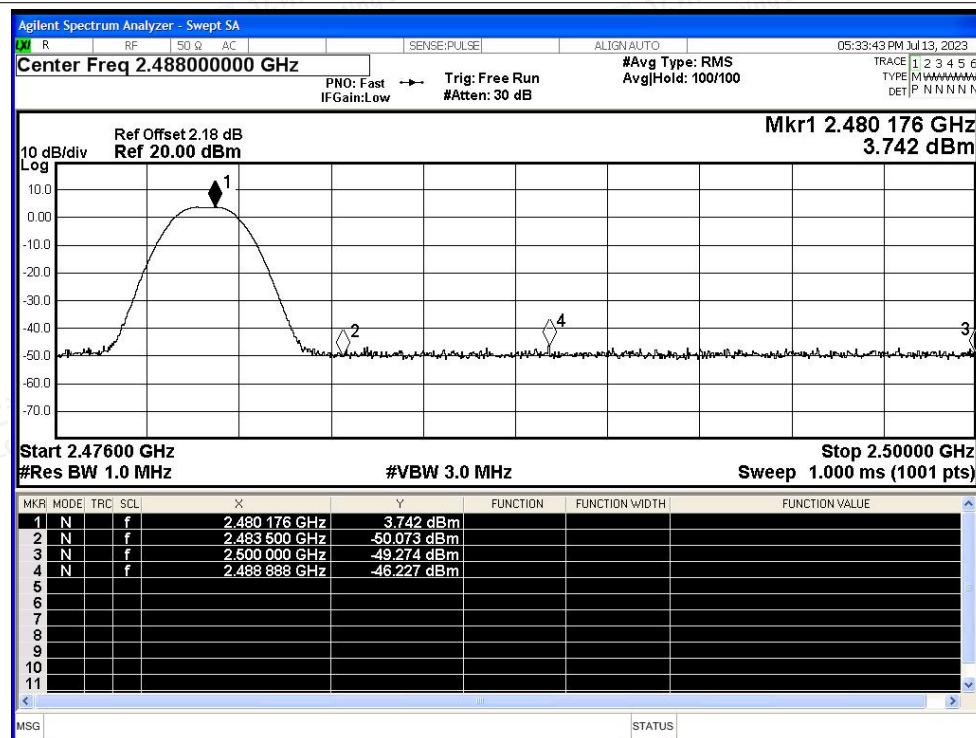


## Restrict Band NVNT BLE 1M 2402MHz Ant0 Average





## Restrict Band NVNT BLE 1M 2480MHz Ant0 Peak



## Restrict Band NVNT BLE 1M 2480MHz Ant0 Average

